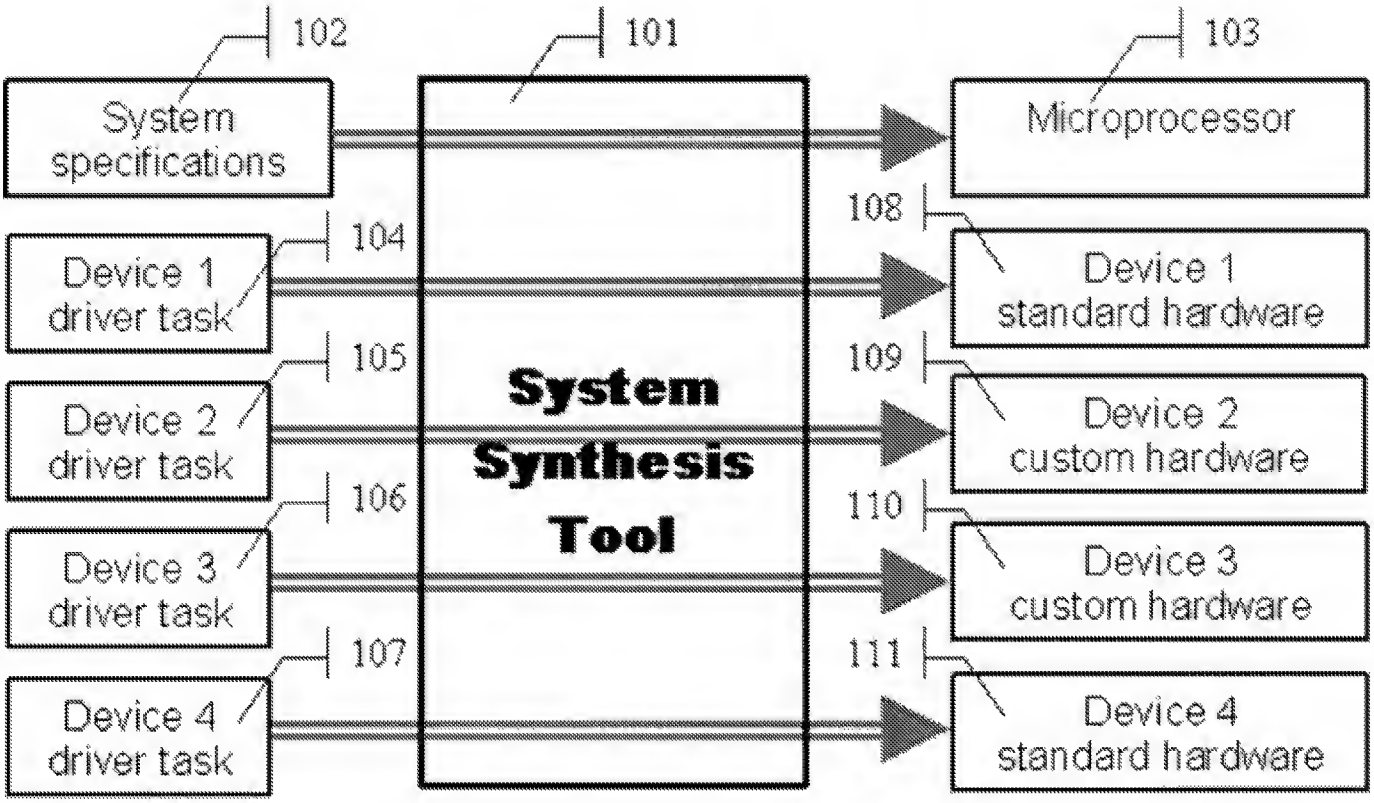
102
101
103
System specifications
Microprocessor
108
104
Device 1 driver task
Device 1 standard hardware
109
105
Device 2 driver task
System Synthesis Tool
Device 2 custom hardware
110
106
Device 3 driver task
Device 3 custom hardware
111
107
Device 4 driver task
Device 4 standard hardware

Figure 1

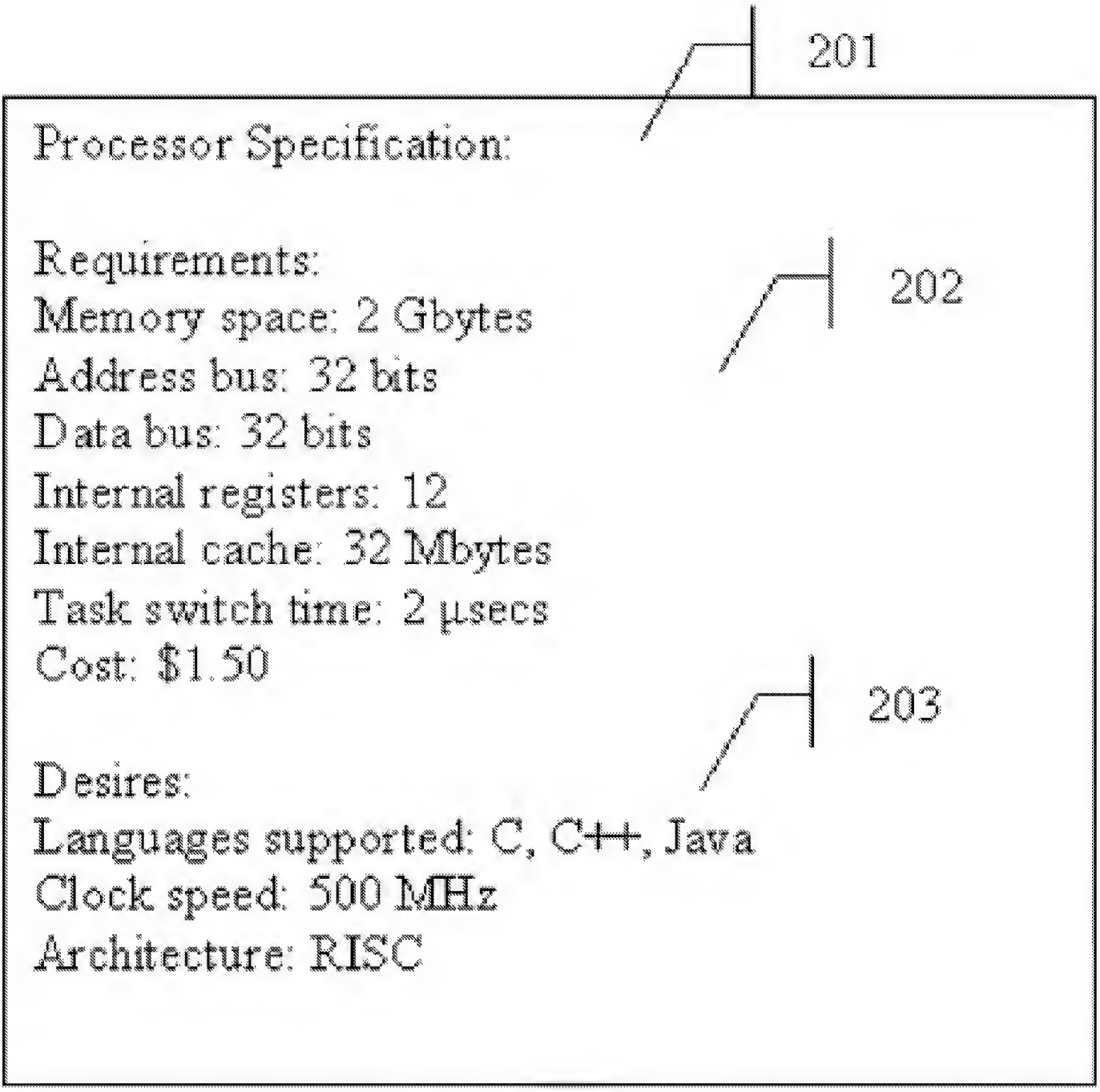
201
Processor Specification:
Requirements:
202
Memory space: 2 Gbytes
Address bus: 32 bits
Data bus: 32 bits
Internal registers: 12
Internal cache: 32 Mbytes
Task switch time: 2 μsecs
Cost: $1.50
203
Desires:
Languages supported: C, C++, Java
Clock speed: 500 MHz
Architecture: RISC

Figure 2

300

301 Processor	302 Memory space	303 Address bus	304 Data bus	305 Internal registers	306 Internal cache	307 Task switch time	308 Cost	309 Languages	310 Clock speed	311 Architecture
MIPS32 M4K	4 Gbytes	32 bits	32 bits	24	16 Mbytes	2 µsecs	$54.00	C, C++, Java, asm	500 MHz	RISC
ARM7TDMI	4 Gbytes	32 bits	32 bits	16	16 Mbytes	3 µsecs	$22.00	C, C++, Java, asm	300 MHz	RISC
PowerPC 405	4 Gbytes	32 bits	32 bits	16	32 Mbytes	4 µsecs	$65.00	C, C++, Java, asm	300 MHz	RISC
68HC11	64 Kbytes	16 bits	8 bits	4	0 Mbytes	1 µsecs	$1.00	asm	10 MHz	CISC
8051	64 Kbytes	16 bits	32 bits	4	0 Mbytes	1 µsecs	$0.50	C, asm	10 MHz	CISC

Figure 3

500

```
/*** This is the normal header comments for the routine      ****/
/***                                                        ****/   301
/***                                                        ****/
/***                                                        ****/
/*** The following information is required for the present          502
invention      ****/
/*** Driver information:
        Name: Ethernet driver
        Version: 1.01
        Hardware: ETH101
        Other:                                                   503
                                                           ****/

EtherDriver(in1, in2, in3, out);
(
        // body of code
)
```

Figure 4

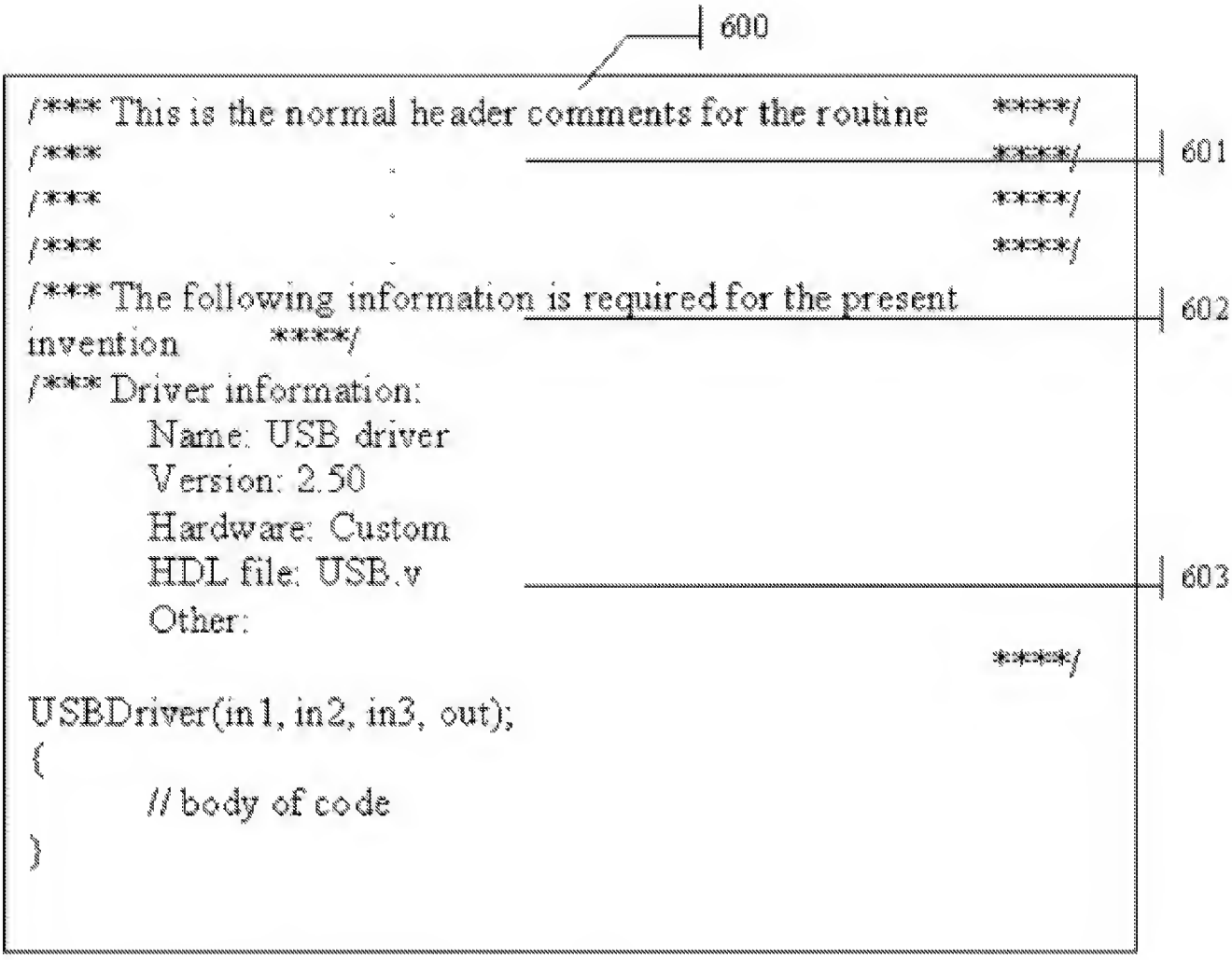
600
/*** This is the normal header comments for the routine ****/
/*** ****/
601
/*** ****/
/*** ****/
/*** The following information is required for the present invention ****/
602
/*** Driver information:
Name: USB driver
Version: 2.50
Hardware: Custom
HDL file: USB.v
603
Other:
****/
USBDriver(in1, in2, in3, out);
{
// body of code
}

Figure 5

```
/*** This is the normal header comments for the routine
        ****/                                                    601
/***                                                    ****/
/***                                                    ****/
/***                                                    ****/    602
/*** The following information is required for the present
invention       ****/
/*** Driver information:
        Name: USB driver
        Version: 2.50
        Hardware: Custom                                         603
        HDL file: USB.v
        Other:
                                                       ****/
USBDriver(in1, in2, in3, out);
{
        // body of code
}
```

600

Figure 6

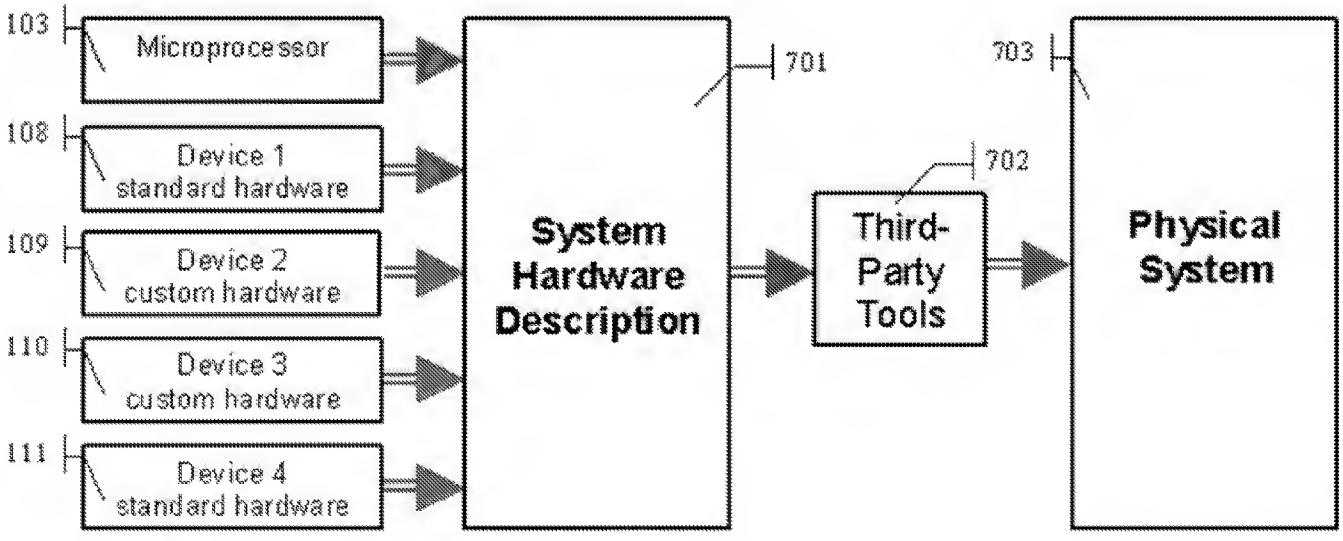

Figure 7

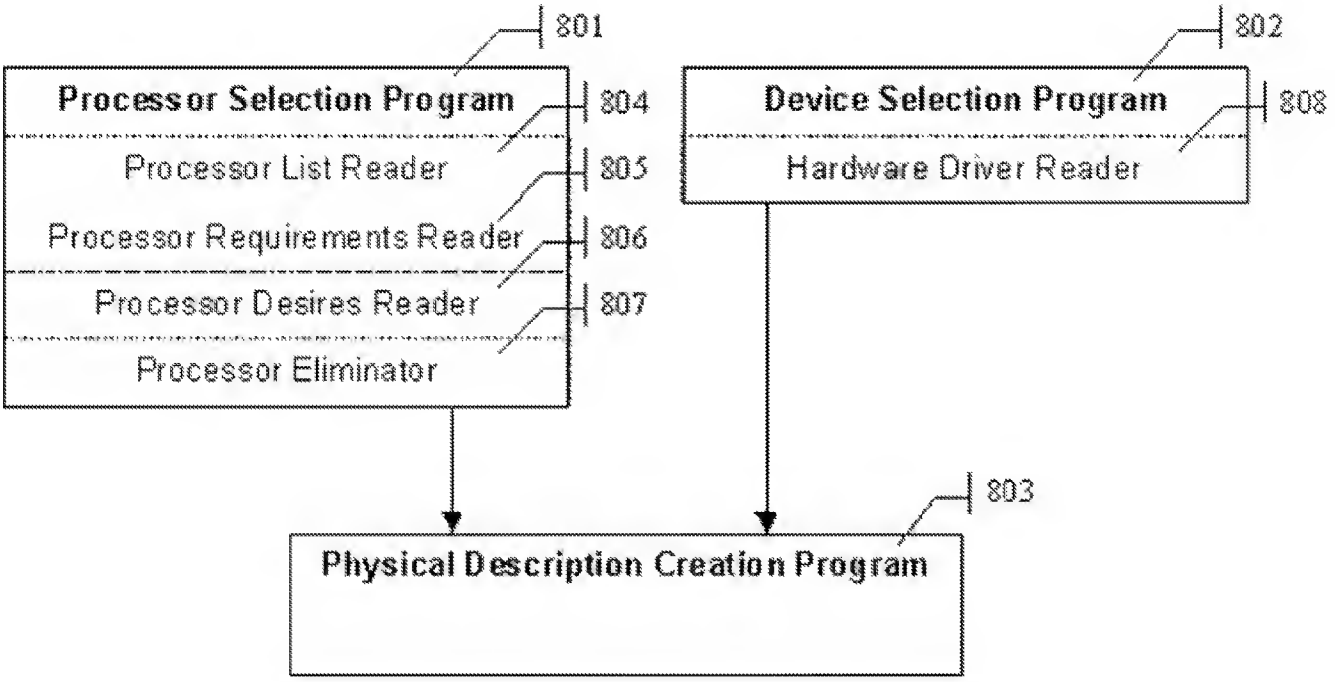

Figure 8

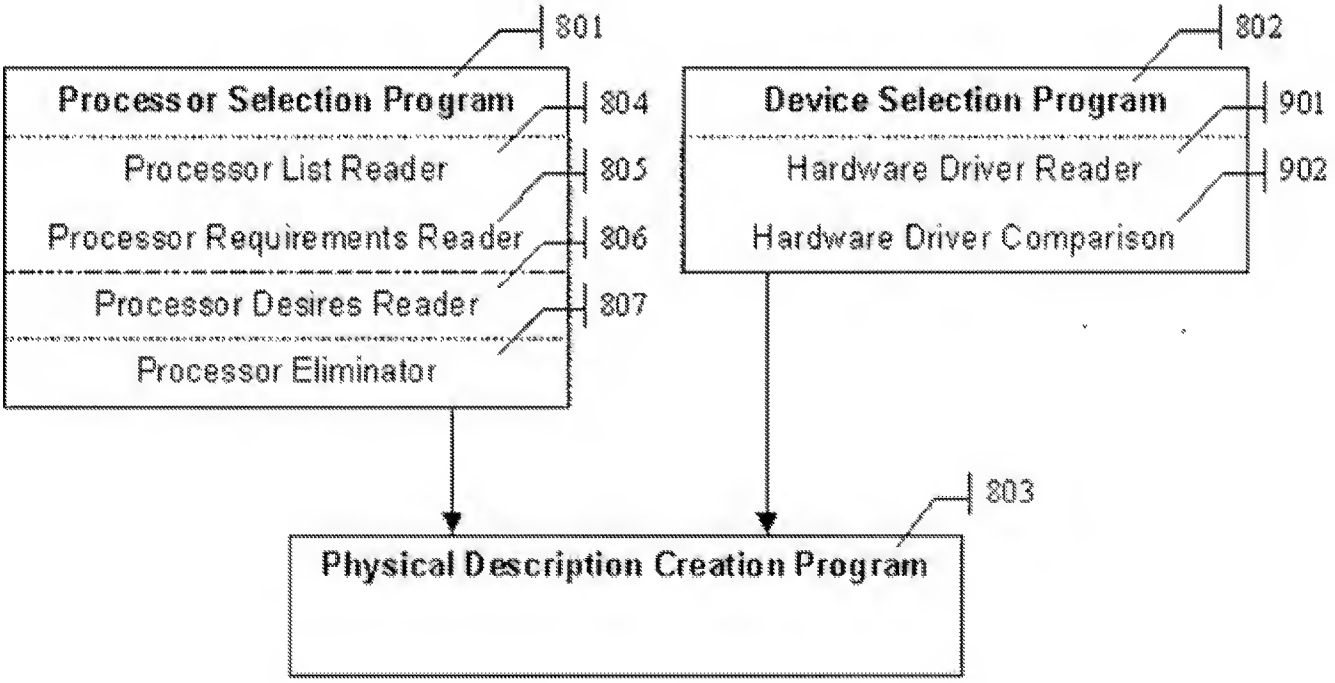

Figure 9